

GEORGE W. YORK, Editor.

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40th YEAR.

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No. 29.



Mr. and Mrs. J. W. Hubbel and Apiary, of Clark Co., Wis.

Two Clark Co., Wis., Apiaries.

MR. Harry Lathrop, of Green County, about a year ago, visited a number of apiaries in Wisconsin, among them the two shown on this page. Afterward he wrote up his trip for the Wisconsin Agriculturist, from which we take these paragraphs:

"Peter J. Klein has an apiary of about 40 colonies. His principal honey-plants are dandelions, white clover, raspberries, basswood and asters. He informed me that in 1894 he took 900 pounds of comb honey from 3 colonies and increased them to 9. The honey was nearly all taken late in the fall from asters.

"Mr. Klein showed me a building made with double walls which he had constructed for the purpose of wintering his bees, but it was not a success, so he used it for a workroom and used his dwelling-house cellar for a winter repository. I have seen quite a number of such buildings and in most cases they have been put to other uses than that for which they were constructed. It requires very thick walls to make a building that will maintain an even temperature above ground. I saw such a building that is a success as a winter repository. It was built by H. R. Boardman, of Ohio. The walls are about 14 inches thick.

"After a few pleasant hours spent with Mr. Klein, during which time I was taken out in the great forest to examine the various honey-plants, he kindly provided a horse and buggy and together we went on to the home and apiary of John

Hubbel. Mr. and Mrs. Hubbel are both enthusiastic bee-keepers and have an apiary of 110 colonies all in good condition. With them, as with most others, the honey crop for 1899 was quite light, but they, like most bee-keepers, are of a hopeful turn, always seeing golden harvests in the future. For a short time we had a real lively bee-keepers' convention and then enjoyed a good farm dinner, prepared by the skillful hands of the bee-keeper's wife."



The Home Honey Market.

BY C. DAVENPORT.

ONE day last fall, while at work in the shop and honey-house combined, a stranger stepped in the door and greeted me with, "How do you do, Mr. Bee-keeper? Have you any nice white comb honey to sell this fine day?" He was the buyer for, and part owner of, a large grocery in a city some 20 miles distant. He bought and carried back in the light spring-wagon he came in, \$67 worth of honey, for which he paid 15 cents a pound. I mention this because it so well illustrates what I wish to emphasize in regard to developing the home market; and that old saying, "Rome was not built in a day," can aptly be applied here, for it takes time, a number of years, to discover and fully develop its full possibilities, in perhaps I may say the average locality; that is, it does when a strong, vigorous effort is made to do so.

Some bee-keepers might reside in the same locality un-



Apiary and Daughters of Mr. Peter J. Klein, of Clark Co., Wis.

til time had whitened their once black or red hair, without making much progress in this line; in fact, many imagine they have no home market to develop.

Again, let me cite something that will make my meaning in this respect clear. Some time ago Mr. F. L. Thompson, who, altho not engaged in our pursuit long, is a well educated, intelligent man, and a ready—indeed, I think, owing to the many remarks he has made about what I have said, he should be willing to allow me to say that he is almost a *too ready*—writer, told me in the American Bee Journal some time ago in a very interesting way how he attempted to develop his home market. Probably most of those who read this also read what he said, so I will only say that his plan was peddling or canvassing from house to house. He met with such poor success that he decided that in his locality there was no home market worth developing, at least for him.

Now note the case of Mr. R. C. Aikin, of the same State (Colorado); he has in time developed a home demand which I believe takes thousands of pounds more to supply than he produces, and if I am right he is engaged more extensively and produces much more honey than Mr. Thompson does; and from reading what both have said in regard to their localities, I judge that in Mr. Thompson's locality the possibilities for creating a large home demand were much better than in Mr. Aikin's. It is my belief that the only localities in which a large home demand can not be created are those in which lack of population prevents. But even in sparsely inhabited localities the chances are far greater than many would think.

Let us imagine a territory embracing 20 miles in each direction from a bee-keeper. Suppose it has only 10,000 inhabitants; this, counting the residents of the towns and villages it might contain, would be a very sparsely settled region, indeed, but if each person, on an average, consumed five pounds of honey yearly, tho it would mean only a small fraction of an ounce per day for each, and they could consume this much by taking it in the form of pills, the way Mr. Thompson has suggested, still it would take 50,000 pounds to supply their annual demand.

Of course, I am fully aware that there are many persons in all localities who do not, and who probably could not be induced to, use any honey at all; on the other hand, tho, there are many who consume more than five pounds annually, and a great many more that could without much difficulty be induced to do so.

Now, the only way that the consumption and demand for honey can be increased is by advertising. At first this seems like a strange assertion. I can imagine some one saying, "Cut the price down say one-half, and see if it does not increase its consumption and demand." My friend, that would be advertising in one of its most effective forms, but an unprofitable way to the producer.

Another might say, "I never advertise, but I produce a first-class article, and my sales are increasing each year." This is another and more profitable form of advertising; that is, in this case the goods advertise themselves, owing to their merit. But this form may under many conditions be far too slow to secure the practical results that would be attained in combination with other forms. Advertising combined with merit is the secret of success in almost all forms of business, and sometimes advertising alone brings great success in a financial way when merit is nearly, if not entirely, lacking; and the number of effective ways or forms of advertising are great and varied.

For instance, P. T. Barnum used elephants to plow with, not because the work could be done cheaper with them than with horses, but simply as an advertisement, and he took good care to see that the plowing done with these ponderous beasts was where it would be daily seen—not only by a great number, but also great numbers of different people. But it must be borne in mind that Barnum was too shrewd a man to expect any full or adequate immediate returns for this expensive work with animals that cost more money in those days than many of us can accumulate with bees in a lifetime, and no immediate returns could be expected from the large sums of money he spent to have long lines of railroad cleared. But again he took great care that the *anxious*, delayed passengers should know that they could not proceed because the road was cleared for Barnum, who was coming thru on a special train.

Now, many forms of advertising I have practiced to increase the local demand for our product have brought in far less immediate returns than the effort expended justified me in expecting, but, as with Barnum, it has all told in the long run, and the success I have achieved in this respect is due to advertising in varied ways the fact that I am a pro-

ducer of honey that is first-class of its kind. And in our pursuit no really permanent success can be obtained unless we produce first-class goods, but it is advertising that enables me to annually dispose of thousands of pounds in my local market, and which brings people from 20, and even 30, miles distant.

As I mentioned at the beginning, peddling from house to house I consider a poor method of advertising, at least so far as immediate returns are concerned, but it can be done in such a way that it will result in much future benefit. Of course, tho, locality and the man will make a great difference in the sales that can be made in a house to house canvass; this was my first method of trying to develop my home market, and it was persistently followed for some time, but this work was to me so disagreeable, and the results so far from what I desired, that it was long ago entirely abandoned for easier but much more effective methods of advertising, and altho I have perhaps already said more in relation to this matter than many will care to read, there is so much more I would like to say that I shall, if the editor permits, continue the subject in my next, in which will be described more in detail the most practical form of advertising that I have practiced.

Southern Minnesota.



Improvement in Stock the Most Hopeful Field in Commercial Bee-Keeping.

BY J. E. CRANE.

I DO not suppose that all of the honey secreted by the flowers will ever be gathered, even by the best of bees, still less will the best or most productive bees it is possible for man to produce ever get honey where none is to be had; but, if we can breed from our strongest and most industrious colonies till 50 or 75 such shall gather what 100 are now required to do, we shall at least save what it requires to keep the extra number of colonies. I believe we would better, for a time, look for *Apis dorsata* in our own yards. If we fail to find it, we may, perchance, find something even better.

I will not give in proof what a few isolated individuals have done, who are far away where distance lends enchantment, altho I might safely do so, but rather give a few facts from my own experience.

I became disgusted with the superior qualities of breeds as a whole. I had found some colonies of black bees greatly superior to the average Italian; while the qualities of the 3-banded Italians I had found, from many years experience, to be exceedingly variable. I advanced the theory that great improvements might be made by careful breeding for this purpose. That I might know what had already been accomplished I bought as good a queen as money would buy from a queen-breeder who I had reason to believe had for many years been trying to improve the productions of his bees. I was unprejudiced, and seeking for the truth. During the summer of 1898 I reared some 35 young queens from this purchase queen. Of course, these mated with my own drones, or drones from my old stock.

The spring of 1899 found me with enough of this cross to judge somewhat of its value. The colonies of this stock were scattered thru two yards, and had the same care as my old stock.

I did not have long to wait, however, to note a difference after the flowers began to bloom; for I could tell the hives containing these young queens about as readily by the extra amount of early honey gathered as by their color, which was quite distinct from my own. The season proved one of the poorest I have ever known, yet these bees showed their superior working qualities during the entire season.

In September, when I came to look my hives over to see how much honey each one had for winter, I found my old stock to average 10 or 12 pounds in their brood-chamber, while the new stock averaged not far from 25 pounds, nearly or quite enough to winter on.

Later (in November or December), I wished to get rid of some honey in some old drone-combs, and placed them in the sun on the south side of the barn out of the wind, as the weather was quite cool, to see if perhaps the bees would take it out. I was surprised to notice that almost every bee that worked on it (and they were numerous) was the descendant of this purchase queen, as could easily be told by the color, while I had yet in my yard some 25 colonies of my old stock of bees. Whether trying to gather honey at so unseasonable a time of the year is a virtue, or otherwise, I will not attempt to decide, but it shows at least their vigor,

energy, and determination to get honey under adverse conditions.

Another point in favor of these bees, altho only a cross between superior stock and my own, was that they run very evenly; i. e., what seemed to be true of one seemed to be true of all; showing that the queen I had purchast had come from stock bred for productiveness for many generations; and was capable of transmitting her good qualities in a very marked degree.

To accomplish such improvements in bees as I have outlined, the honey-producer should be able to rear all of his queens from the most productive colonies in his own yard, or from the best queens to be purchast; and this involves the necessary intelligence and skill for rearing artificially, with ease and rapidity, all his young queens from year to year.

In closing, let me say that however it may be with others, I am satisfied that, for myself, there is no direction in which I can make such decided and paying improvements in the production of honey as in the rearing of all my queens from the best and most productive stock to be found in my own apiaries, or that can be purchast for a reasonable sum of money.

To this end I shall devote my energies as never before, that the present season may show a large advance over the past in improving my bees.—Bee-Keepers' Review.



From the Freshly Laid Egg to the Fully Developed Queen.

BY DR. C. C. MILLER.

ON page 199, Vol. I., of the American Bee Journal, the Baron of Berlepsch gives details of an experiment he made, in which queen-cells were sealed nearly ten days after the eggs were laid, and the queen emerged from the cell fully 18 days after the laying of the egg. In another experiment the time was 17 days. "These experiments," he says, "show that the opinion generally entertained, that the queens emerge between the 17th and 18th day after the eggs are laid, is correct." This was 40 years ago. Later, 16 days came to be accepted as the orthodox length of time for a queen, and still later some have called the time 15 days. T. W. Cowan says that queens mature "in from 14 to 17 days from the day the egg is laid." In a table of "Metamorphoses of Bees," British Bee-Keepers' Guide-Book, page 10, he gives what is probably meant to be the average, as follows:

1. Time of incubation of egg.....	3 days.
2. Time of feeding the larvæ.....	5 "
3. Spinning cocoon by larvæ.....	1 "
4. Period of rest.....	2 "
5. Transformation of larvæ into nymphs....	1 "
6. Time in nymph state.....	3 "
Total.....	15 "

It is probable that a principal reason for the formerly accepted longer time, and for the considerable variation allowed by so good an authority as Mr. Cowan, comes from the fact that nuclei instead of full colonies were used in some of the cases for observation. Berlepsch used "a small forced swarm" in the experiment which gave him 18 days. Possibly if observations were always made with full colonies under favorable conditions, Mr. Cowan's 15 days might never be exceeded. It will be noted that Mr. Cowan has the larva fed 5 days, and Berlepsch nearly 7, Cowan's queen being sealed when 8 days old, and Berlepsch's when nearly 10, counting from the laying of the egg.

Incidentally, I made some observations last summer as to dates of sealing and hatching, while experimenting as related on page 834 of Gleanings in Bee-Culture for last year. It may be remembered that the five combs, *a*, *b*, *c*, *d*, *e*, were given in succession to the same queen to be laid in, so that every egg in any comb was older than all the eggs of any comb coming later in the list. I rather expected to find that the cells, both worker and queen, would be sealed in the order of their ages, all the cells of *a* being sealed before any cells in *b*, and so on. Such was not the case, for July 7 I found six worker-cells sealed in *b* while some cells were still unsealed in *a*. It might be supposed that the position might have something to do with it, the bees being more slow to seal cells in the outside comb, *a*. But this argument could not apply at the other side of the brood-nest, for July 12 I found 4 worker-cells sealed in *e*, while

there were cells still unsealed in *d*. It seems clear that in this case cells were not sealed strictly in the order of ages.

July 6 I found about 10 square inches of sealed worker-brood in *a* when the oldest larva was less than 8 days and 30 minutes old (I count always from the laying of the egg). This agrees with Cowan's table, "time of feeding the larvæ, 5 days." As some little time should probably be allowed for the sealing of 10 square inches, it is likely that some of the cells were sealed when the inmates were less than 8 days old. Next day at 4 p.m. some cells were still unsealed when all had past the age of 5 days 4 hours.

Comb *b* gave much the same testimony: Six worker-cells were sealed when none had past the age of 8 days 4 hours (they might have been considerably short of that), and a few cells were left unsealed when all had past the age of 8 days 2 hours.

On comb *c* four worker-cells were sealed when the oldest lacked 45 minutes or more of being 8 days old. On this same comb the last queen-cell started (with too old larva) was not sealed till it was 9 days 3 hours old or older.

July 5 I started an experiment for the sole purpose of deciding something about the times and seasons of development. At noon I gave to No. 84 an empty comb for the queen to lay in, and took it away 4 hours later, with about 80 eggs in it, putting it over an excluder on 51. This upper story was strong in bees, and it was no doubt well cared for. July 8, 4 p.m., only 5 eggs were hatcht. At this time all the eggs were at least three days' old, showing that most of them did not hatch till after 3 days old. I think others have reported considerably less than this, showing that the bees are not uniform in their proceedings, but very likely Mr. Cowan is right in giving 3 days as the time for eggs to hatch.

At this time, July 8, 4 p.m., the comb was given to No. 18, its queen, all its brood, and some of its bees being taken away at this time, leaving it a fair colony, but not strong. July 10, 6 a.m., larvæ were lavishly fed, several slightly enlarged as for queen-cells, and one hooded. One or several observations were made daily, but it is not necessary to recite all.

July 13, 6 a.m., one queen-cell sealed and one worker-cell. These were somewhere from 7 days 14 hours to 7 days 18 hours old. At 9 a.m. no change. At noon a few more worker-cells sealed. At 6:15 p.m. another queen-cell sealed. This cell must have been sealed when not more than 4 hours under 8 days old, and not more than 6 hours 15 minutes over 8 days old. These were perhaps the only queen-cells started with larvæ of proper age, for the age limit was reached July 11, 4 p.m. But the bees continued to start queen-cells, and seemed especially desperate in the matter when the age limit had been past some two days, for 16 fresh queen-cells were started between July 13, 6:15 p.m., and 4:30 the next morning. It should be remarked, however, that 4 other cells had been started soon after the age limit was past.

It would seem as if the attempt to make queens of too old larvæ had the effect to prolong the time of sealing beyond what it would have been if the larvæ had been treated thruout as workers. Notice what follows, and you will see that this is so. When the 8 days from the laying of the last egg had been past 12 hours 30 minutes, there were 16 queen-cells unsealed. At 17 hours past the 8 days, 9 were still unsealed. At 21 hours past the 8 days, 3 were still unsealed. At 25 hours past the 8 days, 2 were still unsealed. I am sorry to say there is no note when these last were sealed.

July 20, 6 a.m., no queen had yet emerged. At 10:25 a.m. one was out of the cell and was removed. This queen emerged from the cell in not less than 14 days and 14 hours, and not more than 14 days 22 hours 25 minutes after the laying of the egg.

There seems nothing in these observations to throw discredit on the table of Mr. Cowan, and it may not be an unfair inference that he drew his conclusions from colonies of fair strength while others used nuclei.

A practical consideration is that those who count upon 16 days from the laying of the egg to the emerging of the queen may have a fine batch of queen-cells destroyed by a queen emerging inside of 15 days.

It appears quite plain that bees are not uniform in their performances, and it would be nothing strange that the next experiment should give different results.

I am quite strongly of the opinion that there is much more variation as to the time of sealing queen-cells than there is in the time of sealing worker-cells. I have been surprised, sometimes, upon opening a sealed queen-cell, to find it occupied by so small a larva, and this with everything in prosperous condition. The bees can afford to vary no little with queen-cells, while such variation with worker

would be disastrous. As a rule the rations of the worker are carefully measured out, not an iota remaining unused; and if the larva should be sealed up a day or two before the usual time, the worker would be dwarfed if not starved. With a royal larva it is different. From first to last it has an excess of food, and if sealed up while quite small it has a sufficient supply to last. McHenry Co., Ill., Jan. 12.

[This article, as will be seen by the date, was written about the first of the year; but I have held it till now so that the interesting conclusions can be verified or disproved in the apiary. I should like to have our readers, especially queen-breeders, go into the matter carefully; for in a practical way it involves the matter of choice queens, and that means honey.

What surprised me is that in one of the experiments conducted the bees should have apparently waited so long before starting the bulk of the cells; for Dr. Miller says that 16 fresh queen-cells were started on the 13th of July, just 8 days after the eggs were laid, or 5 days after the larvæ were hatched. We have heretofore assumed that larvæ just hatched, or larvæ not more than three days old, was the preferred age; but here is a case where the bees evidently had a preference for the five-day limit. Now, the question is, was this exceptional with this colony, or is it the common average? Now, don't you see a great deal of importance attaches to this?—Ed.]—Gleanings in Bee-Culture.



Moving Bees Short Distances.

BY I. W. BECKWITH.

UNDER the above heading G. M. Doolittle, on page 291, makes some statements that are likely to do mischief.

In the first place, he moves his bees with as little jar as possible; why, he does not say. It can hardly be on account of the danger of breaking down the combs, for unless they are new and full of honey, there is no such danger loaded in a wagon without any protection. Neither can it be that he thinks it necessary to avoid disturbing the bees with so much jarring, for when he gets them home he finds it necessary to pound on the hives and disturb them for a considerable time.

But the more important error that he makes is in the statement that the bees will not find the hive that is left to catch the returning bees, provided it is moved more than five feet from where their hive had formerly stood. If the hives had stood more than five feet apart it would be necessary to leave at least every other hive, which would allow very little choice in the strength of the colonies to be left; and then, when these were taken home there would nearly as many bees return and be lost as though he had moved all at once; since those that returned from the first lot moved are the field-bees that would be liable to return again. And if the distance between hives should be more than ten feet, there would be no use in leaving any.

He says: "If you move the weaker colonies more than five feet you lose all the bees that fly from that;" and a little further along on the same page he says: "But after careful watching for many years I am satisfied that all such bees finally go back to their new location, if they have been treated as here given." I would like to ask Mr. D. which of these two statements is correct? I might report cases to show that neither is true, but will only relate one case, and I think the universal experience of observing bee-keepers is the same as mine.

On May 5th I bought nine colonies of bees from a neighbor living about 40 rods from my place, and that evening I moved seven of them home, leaving two very weak ones to catch those that should return. Four of the hives were scattered, having been left where the swarms were hived last summer, and two of them were 50 feet or more from where I left the "catcher." The other five were on a stand together. The next day I went there to see how they were getting along, and found that those two were catching the bees all right, the one where the five had been catching most of the bees.

After two days I brought home the one that had caught the most bees, and set the other in its place. Again, after two days, I brought this one home also, and took a very weak colony from home to put in its place, which caught quite a number of bees. The bees were working vigorously at this time.

Fremont Co., Wyo.

The Premiums offered this week are well worth working for. Look at them.

The National Queen-Breeders' Union.

BY J. O. GRIMSLEY.

AFTER reading the editorial on page 360, relative to the National Queen-Breeders' Union, I am convinced that Mr. York, like many others, has formed a wrong idea—probably from not being informed as to the real object of the organization. One thing leading to this conclusion is this, that he says: "Suppose the supply-dealers should form a union, telling how honest they are," etc. This has no bearing whatever on such an organization as the union of queen-breeders, and proves that he does not understand us. His reference to the "free advertising" is still further evidence that he misunderstands us—and my editorial in The Ruralist.

I can not accuse Mr. York of being so selfish and shortsighted as wilfully putting an error before his readers; in fact, I must say he is a clean editor, always looking to the interest of his readers. Had I any other opinion of him I could not write for his columns at this time, or any other. I believe him sincere when he says: "We bear not the slightest ill-will toward the National Queen-Breeders' Union, or its members." Really, I believe a mutual friendship exists between Mr. York and each member of the Union. I make these remarks to show to the readers of the "Old Reliable" that no ill-will exists—his comment was timely, and, barring his lack of information regarding the Union, nothing can be said against it.

He says: "The National Bee-Keepers' Association is an organization of which every one at all interested in bees should be a member. It is not restricted to a half dozen or so people who have something to sell to bee-keepers, but it is in the interest of all who keep bees." Every word of that is true, and I might add further that bee-keepers everywhere stand in their own light by not joining the Association. I keep the card of the Association standing at the head of my column in The Ruralist, and give it all the "free advertising" I can. The "half dozen or so people who have something to sell to bee-keepers" has an indirect reference to the National Queen-Breeders' Union. Of course the Union can't number up into the hundreds like the National Bee-Keepers' Association, for every bee-keeper can't be a queen-breeder, neither, indeed, will such ever be the case, but a majority of the bee-keepers are dependent upon the queen-breeders for just such stock as they need. Mr. Root recognized the fact that queen-breeders were not numerous when he wrote to me that "the queen-breeders can be counted on the fingers of your hands." I can hardly think they are so scarce as that, but the real, honest, up-to-date breeders may be—I can't say.

The National Queen-Breeders' Union blows its horn of "honesty" because no dishonest breeder can remain a member, and in case a member "beats" a customer, the Union is bound to make the loss good. That is no bad feature, is it? We number but few, I admit—always will, for there are few breeders—but we want every honest breeder in our ranks—they belong there, the bee-keepers are interested, and will be benefited.

"Free advertising" of the Union is like "free advertising" of the Association. The members of the Union are individual advertisers of queens, while the members of the Association are individual advertisers of honey, queens and supplies—in each case, of course, so far as advertising is required.

The fact that the Union guarantees honest and square dealings upon the part of individual members will make breeders slow to join, but we will number all honest breeders in our ranks when they fully understand what we are doing.

The Union fixes a standard for Italians, Golden Italians, Carniolans and Albinoes, and will, as occasion requires, add others. In this we settle the name Golden Italian, and show what each class of queens must produce. Heretofore no standard was recognized, except as individuals might fix.

An application for membership must show how the surroundings are, as regards neighboring bees, and chances for pure mating—everything, in fact, tends to encourage every possible improvement, both in stock and methods of rearing. The organization is looking to something more than individual interests. It wants to benefit all, and is exactly the same class of organization as the National Bee-Keepers' Association, except it is composed exclusively of queen-breeders, and the members must be received by a vote. If its rules were not strict in that regard unscrupulous breeders would soon outnumber the honest, and the organization would be a farce.

Of course, it will take time to perfect the organization, and get its objects and good features properly before the

bee-keepers, but with the addition of most of the best breeders we will prove that our "pet scheme" is of as much worth to American bee-keepers as the National bee-keepers' Association is.

Overton Co., Tenn.

The Boardman Feeder—Rendering Wax.

BY G. H. FREY.

NOT long since I saw the question asked as to what to do with Boardman entrance feeders to keep the feed from running out faster than the bees would take it. A few years ago I commenced keeping bees, and after reading books and papers on bee-keeping, and talking with experienced bee-keepers, I concluded it would be a good plan to feed, especially in the spring up to the time of the honey-flow. So I began to look for a good feeder, and after studying all kinds I decided to try the Boardman entrance feeder, as did some other bee-keepers here, one to the extent of getting 100 feeders, which he has not used yet.

After getting my feeders (20 in number), I found that no matter how level, or how careful I might be, the feed would run out as fast as possible, taking about five minutes to empty a quart jar. I worked and fussed with them until I became almost disgusted. At last I tried putting a piece of thin cloth over each jar before putting the cap on. Sometimes I would punch holes thru the cloth if it didn't let feed thru fast enough; but I found this unsatisfactory. Then I put my thinker at work again, and finally came to the conclusion that the hole cut in the cap was too large, so I tried some with a $\frac{3}{8}$ -inch hole cut in the center of the old cap, using both caps. This gave the best of satisfaction. Then I fixed all I had, which I use right along now, but I find in putting the special cap on the other cap they must be soldered as tight together as possible all around (not fastened all around, but just in three or four places).

I have had some experience in rendering wax from old combs. At first I tried melting and straining, but got very little wax. The past spring I made a press by taking two planks (hard wood) $5\frac{1}{2}$ feet long and 14 inches wide, hinged together at one end with three of the largest size strap hinges, the hinges being bent to fit over the ends of the planks, after putting a $\frac{3}{8}$ -inch thick strip of wood between the planks after the hinges are bolted on. There is a 3-inch square hole cut about 12 inches from the hinged end in the bottom plank, with heavy screen over it, such as is used in sand-sieves, nailed solid with small staples. The ends of the planks opposite the hinged ends are hewed off so as to be used as handles.

I use a large tin boiler to boil the combs in. They should be allowed to boil up well, so as to get all the wax melted. I also use a large size wooden tub, with a strip nailed across one side, down about 6 inches from the top, for the hinged end of the press to rest on. I also have a box for the handle end to rest on to keep the weight off the tub. Then, taking about half a grain sack, I put in $\frac{1}{2}$ gallon of the melted combs, and folding the sack as much as possible, I proceed to press it out, folding the sack until all the wax is prest out.

The press will need a strip of cloth on each side, and ckt on the top plank. Also, a piece across the top plank in front of the portion used as a press. Extracting wax is a job with all common methods, and this plan is no fun.

After all is prest out and cooled, take off the wax and melt it again in some water, and if very dirty it might be best to melt a couple of times, but in melting two and three times don't let it boil; just let it come to a boil, so as to have all the wax melted.

Linn Co., Iowa.

Candied Comb Honey—How Profitably Utilized.

BY A. M. APPLIGATE.

THIS question has been frequently discussed thru the journals, and all the best methods given for saving the honey and wax; but in all these you destroy the comb and leave the honey so inferior in quality that you hardly realize enough out of it and the wax to compensate for the nice straight combs you sometimes have to melt in order to get the honey.

The method I will attempt to describe preserves the combs as nice as new, and instead of the second-class honey you have first-class vinegar, which will bring you as much money and be as easily disposed of. Besides, you are all aware that inferior honey should not be put on the market at any price.

Having provided a barrel with one head out, take the frames containing the candied honey, and where they are sealed comb them with the edge of a wire-cloth just enough to expose the honey. Sometimes there will be enough honey in the combs that can be thrown out to pay for uncapping and running them thru the extractor first. Then pack the frames containing the combs as snugly as you can in the barrel, noting at the time about how much honey they contain so that you will know how much water to add. Having the frames secured in the bottom of the barrel so they can not float, pour in water enough to cover them. You can hurry fermentation by adding a little yeast; or should you already have some fermenting, add a little of it to the one just prepared.

Two pounds of honey to one gallon of water makes very good vinegar; but you should keep it as much stronger as possible so that the water used to rinse the combs after they are thru fermenting and thoroly soured, may be added, making in all about one gallon of water to every two pounds of honey. The honey, and even the pollen that contains some honey, or has absorbed some of the sweetened water, will be fermented out of the cells. What is not removed in this way will shrink from the cell walls, when dry, and will jar out or be removed by the bees. To remove the vinegar from the combs turn the frames, with the top down, supporting them between the thumbs and fingers, let them drop onto some strips across the top of the barrel, gently at first, until the comb is relieved of some of the vinegar; then immerse them a few times in water, jar the water out in the same way, and use it to dilute the vinegar. Any additional rinsing will do no harm, neither is it necessary to have the combs entirely free from the vinegar.

I treated black-brood combs in the same way last summer, and thought what little vinegar adhered to the combs was an advantage.—American Bee-Keeper.

Value of Bees to Farmers, Fruit-Growers, Etc.

BY DANIEL WYSS.

FARMERS, fruit-growers, and gardeners should keep more bees. Will it pay? will probably be the first thought of the reader. Yes, it will pay to keep bees. We do a great deal of work every day for which we are not rewarded immediately, and for which we do not receive direct pay, but expect to be benefited later in an indirect way for such labor. The only profit most people could see in keeping bees would be the surplus honey obtained for family consumption or to put on the market. Bees are the best agents in fertilizing fruits. When fruit-trees bloom, bees visit the blossoms in quest of honey (nectar). This nectar is secreted in a basin in the lower part of the blossom. Around this basin are the stamens terminating at the top into anthers, which contain the pollen. Webster defines pollen as being the fecundating dustlike cells of the anthers of the flowers. The pistil is the female organ, and stands in the center of the flower. It consists of the ovary at its base, which contains the rudiments of the seeds. On the top of the pistil is the stigma which receives the fertilizing powder (pollen) from the anthers.

The two sexual organs—stamens and pistils—are, in certain species, united on the same flower, and in others on different flowers, and even on different trees. Some plants and trees are sterile to their own pollen. Quite a number of species of trees and plants are fruitless when only pollen from the same tree or plant is applied to their flowers; altho the same trees and plants mature fine fruits and seeds when pollen from other trees or plants is applied. This goes to show that it is absolutely necessary in order to raise perfect fruit and an abundance thereof from trees and plants that are sterile to their own pollen, that pollen from other plants or trees of different varieties of the same species be transmitted or carried to the flowers of these self-sterile varieties.

If any reader doubts the above statement, let him make an experiment with two Brighton grape-vines, planted 100 yards or more apart, and that distance from any other grape-vine. Then plant a Concord grape-vine within three feet of one of the Brighton vines, and none to the other. When these vines come into bloom probably as many bees will be found on the blossoms of the isolated vine as on the other two planted closely together. Some of the bees that will visit these two vines, will probably climb over every blossom thereon, and thus intermingle the pollen of the Concord vine with the blossoms of the Brighton, producing perfect fertilization by cross-pollination. This Brighton vine will bear large bunches, well and closely filled with

fine, well-developed berries of the best quality, while the isolated one will yield but few bunches of scattered berries.

A great many varieties of apples, plums and pears are self-sterile, and in order to bear perfect fruit must be cross-pollinated with pollen of other varieties of the same species. Cross-fertilization is strictly necessary for small fruits, such as raspberries, gooseberries, etc. In some seasons, when apples, plums, pears and cherries bloom, the weather is often unfavorable for pollination. It may be too cold and too wet, and the pollen remains too moist and too sticky. If during such seasons there would be but a few hours of sunshine, while the bees in great numbers would visit the blossoms, fruit would set abundantly, and a good crop would be the result. If, however, during the few hours of sunshine no bees would visit the bloom, very little fruit would set.

The honey-bee was wisely created to perform the transmission of pollen, its body being covered, especially on the underside, with many fine hairs of a compound, feather-like nature. When a bee alights on a flower, and whirls around on the same, its hairy body is soon loaded with pollen. Arriving on the next blossom some of the pollen comes in contact with the stigma of that flower, and is fertilized.

Thirty to 35 years ago fruits were more perfect and abundant. At that time there were ten colonies of bees to one at present, in this locality. In those days fruit-trees when in bloom fairly swarmed with bees. Mark the change in the spring when trees are blooming. Compare the number of bees you may see among the blossoms with those of former days.

Thirty-five years ago almost everybody kept bees. Our forests were then full of hollow trees where runaway swarms found lodging-places. From there they would swarm the next season. Runaway swarms from the apiaries, and swarms from the woods, were caught and put in common boxes, nail-kegs, etc. In the fall of the year when honey was wanted a colony or two would be slaughtered by "brimstoning" them. Admit that 35 years ago bees had a better range for gathering nectar (honey) than now. At that time our forests abounded in yellow poplar, linden, or basswood, and other nectar-yielding trees that are getting very scarce now. On the other hand, there is a better range of field flowers, white clover, etc. Three years ago this locality produced more white clover honey per colony than at any other time in 30 years.

Bees are not hard or difficult to winter if you give them some attention in the fall of the year. The writer has wintered from 12 to 25 colonies for 12 years without the loss of a single colony. Bees have other values than here set forth. Their stings are said to be sure cure for a great many cases of rheumatism. Cases have been reported in which the cure was almost instantaneous.

Bees, like stock, have been greatly improved by breeding. They are more docile, not so apt to sting as those of former days, and there is not much danger of getting involuntary treatment for rheumatism from them. Try it a few years, farmers and fruit-growers. Keep more bees, and you will be surprised to learn what a benefit they will be to you.—Tuscarawas Co., O., Weekly.

Belgian Hare Breeding is the title of a pamphlet just published, containing 10 chapters on "Breeding the Belgian Hare." Price, 25 cents, postpaid. It covers the subjects of Breeding, Feeding, Houses and Hutches, Diseases, Methods of Serving for the Table, etc. It is a practical and helpful treatise for the amateur breeder. (See Prof. Cook's article on page 292.) For sale at the office of the American Bee Journal. For \$1.10 we will send the Bee Journal for a year and the 32-page pamphlet on "Belgian Hare Breeding."

Our Wood Binder (or Holder) is made to take all the copies of the American Bee Journal for a year. It is sent by mail for 20 cents. Full directions accompany. The Bee Journals can be inserted as soon as they are received, and thus preserved for future reference. Upon receipt of \$1.00 for your Bee Journal subscription a full year in advance, we will mail you a Wood Binder free—if you will mention it.

The American Fruit and Vegetable Journal is just what its name indicates. Tells all about growing fruits and vegetables. It is a fine monthly, at 50 cents a year. We can mail you a free sample copy of it, if you ask for it. We club it with the American Bee Journal—both papers one year for \$1.10.



CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.)

Keeping Extra Queens Over Winter.

Can one keep extra queens over winter, that is, in a box—so that in case of a queenless colony one can resort to them?

ANSWER.—The only way to keep queens successfully thru the winter is in a colony of bees or a nucleus. The trouble is to bring a nucleus thru the winter, unless it be pretty strong.

Colonies Killing Bees.

I have 16 colonies of bees, and today I lookt thru hive No. 5 at 1 p.m., and, finding them in a normal condition, went away. At 4 p.m. I lookt thru No. 11, that had one queen-cell capt. I noticed before I had closed it that they were fighting on the frames. I closed it up, and at 7:30 I saw at least a half gallon of bees dead at the entrance, about an equal amount at each, No. 5 and No. 11, which are about 3 feet apart, and are black bees. What is the probable cause of this trouble? I have been reading the Bee Journal nearly two years and don't recall a like case asked or answered.

I used planer shavings and a little tobacco in the smoker. The bees were still fighting at nightfall, and I gave them a good smoking. I must wait till morning to see the result.

KENTUCKY.

ANSWER.—A stray swarm may have tried to force entrance. Sometimes such a swarm will be kindly received, and at other times every one of the intruders will be killed.

Some Swarming-Troubles.

1. I have a colony of bees that has attempted to swarm several times; the queen being clipt she did not go with them upon the first swarming, so the bees returned. I then placed a perforated-zinc entrance-guard on the hive and have left it there ever since. The colony has attempted to swarm several times since putting on the guard, but of course in each case the bees have returned. I do not care for increase, and so have put entrance-guards on all my hives. What will be the result? Will not the swarms return each time they attempt to leave, and finally get to work all right. I have two supers on the first colony mentioned, and the bees are working in both. I prefer to have them store honey, instead of wasting their time attempting to swarm.

2. I have been thinking of trying the following experiment with the above colony:

Remove the hive from the stand and put on the brood-chamber a shallow extracting-super filled with frames of comb foundation. Then on top of it put a queen-excluder, and on that the two supers with the bees in them. After putting the queen in the shallow brood-chamber place the old brood-chamber beside the old stand, facing in the opposite direction. This would throw practically all the working-force of the bees back on the old stand, causing them, according to my idea, to fill the supers rapidly, and thus also prevent all further attempts to swarm. After two or three days I would remove the old brood-chamber to a new stand, letting them rear a queen. What do you think of this latter scheme as a method for preventing swarming, and also getting a honey crop? Later on the two colonies could be united for winter, and thus do away with increase that is not wanted.

A. B. S.

ANSWERS.—1. The entrance-guard will hold the queen, so that the swarm will be obliged to return, unless it hap-

pens to fall in company with a small after-swarm or some other colony having a flying queen, when it will leave you without ceremony. As soon, however, as the first young queen emerges, the frenzy to swarm will be redoubled, and there will very likely be cases (I had a number of them) in which the queen will get thru the excluder or thru some crevice, and away go the bees. In some cases the young queens will be successfully held, but exit for the queen must be allowed for the wedding-flight, or you will have a drone-laying queen.

2. I cannot clearly make out just what your plan is, but I think you mean to have the queen without brood in the lower chamber, and eventually all the old brood taken away. If rightly carried out, this will prevent swarming, and may result in a satisfactory crop.

Inside Measure of a 10-Frame Hive.

On page 374 Dr. Miller says the 10-frame dovetailed hive is 14 $\frac{1}{4}$ inches, inside measure. Is that right? I wrote the A. I. Root Co. last winter for their measure, and they said 14 $\frac{1}{4}$ inches inside.

NEW YORK.

ANSWER.—I was wrong and the A. I. Root Co. right. I was a victim of misplaced confidence in the maxim that figures cannot lie. The 8-frame dovetail is 12 $\frac{1}{2}$ inside, and two more frames spaced 1 $\frac{1}{2}$ adds 2 $\frac{1}{2}$ to the 12 $\frac{1}{2}$, making 14 $\frac{1}{2}$. That's the way I figured it out, and I felt quite safe in those figures, not thinking that I had a 10-frame hive that I could measure. I have, however, three of the Draper barns, which are 10-frame, and I have just measured one, and find it 14 $\frac{1}{4}$. It seems that in the 10-framers no room is left for a dummy as in the 8-frame; hence the discrepancy. I certainly would not like to do without the dummy space in the 8-frames, and it would probably be an improvement in the 10-frames, but that wasn't the question, and I ought to have answered 14 $\frac{1}{4}$. As a spite shot at the A. I. Root Co. for getting me into this trouble, I may say that it is a difficult thing at present to get a frame out of the 10-frame hive, and after being in use two or three years in any locality where bee-glue is plenty, it will be simply unendurable.

Bitter Honey—Italianizing—Swarming.

1. I send you by this mail two vials of honey, numbered 1 and 2.

The honey in vial No. 2 I know whence it came, but vial No. 1, I am not so sure about. Can you tell me thru the columns of the American Bee Journal the plants it was gathered from? It is honey that was gathered early, say thru April and up to May 20, or thereabout. You will discover it is very bitter—in fact, so bitter we can't eat it, nor do we undertake to put it on the market.

The honey in vial No. 2 is (or will be when thoroly ripe) very fine, both in quality and body, as when well ripened it is very thick; in fact, so thick it will hardly run, and you notice from the sample it is real clear. This No. 2 vial, which is the large one, is sumac honey. If it doesn't rain too much my 34 colonies will store lots of sumac honey.

2. Did I do right in swapping frames of bitter honey stored in extracting-frames, for empty combs on the outside of the brood-chamber? thus, you might say, making 10 frames for queens to lay in.

3. Are 10 frames 13 $\frac{3}{4}$ x 8 $\frac{3}{8}$ inches, inside measure, as much as ordinary queens will keep filled? My hives hold 12 of these frames, and I have seen every one chock-full of brood.

4. I ordered two golden Italian queens a few weeks ago, expecting to try to Italianize my entire apiary this fall after black drones were "done doing." Now, what do you think of this? I am quite sure I could accomplish it a great deal easier early in the spring, yet I prefer to do the Italianizing in the fall, that I may have laying queens ready for business early in the spring.

Will you give me your ideas about what you would do if in my shoes?

5. I have had only 4 swarms in 3 years that I am aware of. How's that?

Lonoke Co., Ark.

ANSWERS.—1. I can't tell the source of the bitter honey. It reminds one of hoarhound, and in spite of its bitterness some might like it. It is not impossible that a demand might be created for it on account of medicinal qualities.

The sumac honey is not very heavy in body (possibly not well ripened), light in color, with a peculiar flavor

which is by no means unpleasant. If well ripened it is not hard to imagine it might be very fine.

2. Probably you could do no wiser thing than to give the bees frames of bitter honey in place of empty combs, thus getting the honey changed into bees.

3. There is a great difference in the capacity of queens. Some would not keep 12 frames like yours filled, and some would need more; 10 such frames are equal to about 8 $\frac{1}{2}$ Langstroth frames, and many queens find 8 Langstroth frames enough, while others need more.

4. I should certainly Italianize this fall rather than to wait for spring, having just that much the start, but if it were spring I don't think I should wait for fall.

5. If you have for 3 years kept from 10 to 30 colonies, and in that time have had only 4 swarms, you are very much to be envied. Please tell us what you think is the reason you have had so little swarming. The non-swarming question is a live one. J. O. Grimsley goes as far as any one can go in that direction, believing that the swarming propensity can be bred out entirely.

The Chicago Convention of the National Bee-Keepers' Association meets the last week in August, as will be noted by the following from Secretary Mason:

EDITOR OF AMERICAN BEE JOURNAL:—

Please allow me to remind the readers of the American Bee Journal that the next convention of the National Bee-Keepers' Association is to be held in Chicago, Ill., on the 28th, 29th and 30th of August next, commencing Tuesday evening, the 28th, at 7:30 o'clock.

The sessions will be held in Wellington Hall, No. 70 North Clark St., about a block and a half from the Bee Journal office, and about five blocks directly north of the Court House. The hotel at which members can secure lodging, etc., is the Revere House, southeast corner of Clark and Michigan St., only one-half block from the hall. Rates of lodging will be 50 cents per night, and several will have to occupy one room. To many bee-keepers this will be an "added attraction," especially as they will have good beds to sleep on, as Mr. York has been assured by the hotel proprietor. It may be possible that this hotel will not be able to accommodate all of the bee-keepers, altho the proprietor will do his best to see that it does. Each one attending the convention should secure a lodging-place as soon as possible after arriving in the city. There is usually no trouble in getting enough to eat at reasonable rates.

The program for the convention will be different from what it has usually been. There will not be to exceed one paper at each session, and the remainder of the time will be occupied in the asking, answering, and discussion of questions. The question-box will be in charge of such veterans as Dr. C. C. Miller, of Illinois; Rev. E. T. Abbott, of Missouri; D. W. Heise, of Ontario, Canada; C. P. Dadant, of Illinois; R. L. Taylor, of Michigan; O. O. Poppleton, of Florida; and the editor of the American Bee Journal.

On Wednesday evening the editor of Gleanings in Bee-Culture will give an "Illustrated stereopticon talk on bee-keepers I have met, and apiaries I have visited."

The papers will be from such noted ones as Thos. Wm. Cowan, of London, England; Dr. Wm. R. Howard, of Texas; Mrs. H. G. Acklin, of Minnesota; S. A. Niver, of New York; Herman F. Moore, of Illinois; and R. C. Aikin, of Colorado; and if you want to know what the papers are about, and assist in the discussion and enjoyment of the questions, please report in person at the above mentioned hall at the time indicated.

I have been unable as yet to learn what the railroad rates will be, but they probably will be as heretofore—one fare for the round trip from some localities, one and one-third from others, or a cent a mile each way in the Central Passenger Association territory. The exact rate may be learned by inquiring at any railroad station.

A. B. MASON, Sec.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the finest bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us one new yearly subscription to the American Bee Journal at \$1.00.



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IMPORTANT NOTICES:

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The Wrapper-Label Date of this paper indicates the end of the month to which your subscription is paid. For instance, "Dec00" on your label shows that it is paid to the end of December, 1900.

Subscription Receipts.—We do not send a receipt for money sent us to pay subscription, but change the date on your wrapper-label, which shows you that the money has been received and duly credited.

Advertising Rates will be given upon application.

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NO. 29.



NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound. Also some other changes are used.

The National Queen-Breeders' Union.—Mr. J. O. Grimsley, the secretary of this organization, has an article on another page of this issue of the Bee Journal. He sets forth quite ably and fully the objects of the Union in which it is desired to invite all honest queen-breeders. Undoubtedly its aims are worthy, and it might be a good thing for the few queen-breeders in the country to get into the organization. And yet, we fail to see very clearly just why any of the bee-papers should devote much space to advertising it, any more than they should push the claims of the Carriage Manufacturers' Union, because bee-keepers need carriages, and ought to be told who are the honest makers. Or, to bring it nearer home, why should the bee-papers push a Bee-Supply Dealers' Union, if there were one in existence?

There are doubtless just as honest queen-breeders outside of the Union as there are in it. Shall the bee-papers, by devoting space to the Union, favor those breeders who have paid their \$10 membership fees, rather than those who are just as worthy outside of it, and who perhaps are more inclined to patronize the advertising columns of the bee-papers, than are the members of the Union?

By the way, for what purpose is the \$10 membership fee used? But perhaps that is none of our affair.

A Ventilated Double Gable Cover is the one that H. L. Jones says in the Australasian Bee-Keeper he has settled upon as the only satisfactory one, altho he has tried many

kinds, including flat, "Danzy," painted canvas, oilcloth, and tin roofs. A double cover has been somewhat called for in this country, but manufacturers have not seemed inclined to supply it, such a cover, however, having been mentioned in the Canadian Bee Journal as on the market in Canada. The advantage of a double over a single board cover is claimed to be that a hive with a dead-air space between its two parts acts as a non-conductor—warmer in winter, cooler in summer. One objection to the flat board cover is that when it doesn't warp it twists, so that as soon as it acquires a little age disagreeable cracks will be found between the hive and the cover. With the double cover the upper part may have the grain running one way and the lower part the other, such a cover allowing a close fit even when cold. The want for a satisfactory cover is yet to be supplied.

Colorado and Wax-Moths.—F. L. Thompson quotes in the Progressive Bee-Keeper the letter of Prof. Gillette, given on page 200 of this journal, which letter, and the words introducing it, Mr. Thompson thinks might be misleading. As the larva of the moth mentioned by Prof. Gillette does not feed upon wax and honey, he thinks it should not be said to infest honey-combs, but only pollen-combs.

Be Careful in Packing Bees for Shipment.—The British Bee Journal gives particulars of a distressing mishap in which the cover came off a hive prepared to be sent by train, and many persons were severely stung, the bees holding possession of the grounds till dark. The very greatest care should be exercised to see that by no possibility a single bee can escape in case of shipment, and even when hauling to an out-apiary for the first time it is very likely to be the case that some little leak has been overlooked, and a stinging reproof teaches more caution for the future. In case of shipment on the railroad, a safe rule would be to accept no bees from one who has had no previous experience in shipping, and that is practically the rule with railroads in this country.

Small vs. Large Bottoms for Queen-Cell Cups.—Since the production of cell-cups "by the peck," thus popularizing their use, there comes to the surface a difference of opinion as to whether the bottoms of the cell-cups should be of the same shape as the bottoms of queen-cells that bees prepare for swarming, or for a short distance the same size as the bottom of a worker-cell. As originally made by Mr. Doolittle, the cells had large bottoms, a portion of royal jelly was put in the cell, and the little larva placed thereon.

Then Willie Atchley conceived the idea of transferring part of the cocoon with the larva, paring down the comb containing the larva to be transferred, then lifting with tweezers the little cup of cocoon containing the larva, and placing both cocoon and larva in the cell-cup. To make this work more satisfactorily, he made the dipping-sticks upon which the cell-cups were formed somewhat pointed, so that for a little way the bottom of the cell was the size of worker-cells, then suddenly enlarging to the full size of the queen-cell.

Then W. H. Pridgen took up the matter, and took two long strides in advance. He conceived an arrangement for making the cells by wholesale, whether with large or small bottoms, and devised an ingenious arrangement to take the place of the tweezers. This latter consists of what he calls a "transfer," or transfer-stick. The end of this transfer is of such size as to fit snugly into the shallow cocoon, hollowed out at the extreme end, so that the larva is unharmed by the transfer. Pressing the transfer into the shallow cocoon, he lifts the latter and places it in the bottom of the

cell-cup, then after a little pressure withdraws the transfer, and the cocoon with its larva is left in the cell-cup ready for the acceptance of the bees.

The question now is, Which is better, the large bottomed cell-cup with its ration of royal jelly, or the smaller bottom with its transferred cocoon? The large bottom has on its side the advantage of priority, with a possible tendency toward preference for a plan already familiar. With the small bottoms, a piece of the comb must be cut out, care must be taken to have comb of sufficient age to make the cocoons sufficiently tough, and in cutting out the comb a lot of larvæ and young bees may be wasted. On the other hand it is replied that with proper care a piece of comb can be cut out containing larvæ all of the right age, and an inch square of such comb will furnish 50 larvæ, and a patch of dry comb can be put in to fill up the hole; that there is no trouble getting royal jelly and stirring it up to get it of the right consistency, but each cocoon carries with it its ration of food of just the right sort, and that such cells are more readily accepted by the bees.

Each side claims its plan as that of least labor, and it will probably take time to decide which is right, if indeed each is not right from its own stand-point.

Improvement in Stock is a topic that has sprung into prominence as never before during the past year. Mr. J. E. Crane has been working upon it in several successive numbers of *Gleanings in Bee-Culture*, and now discusses it in the *Bee-Keepers' Review*. Mr. Crane thinks it would be well if some of the energy displayed in getting up improvements in fixtures had been devoted to the bee itself. "If half the efforts," says he, "that have been spent in producing a non-swarming hive had been spent in producing a non-swarming breed of bees, I believe we should now have been far in advance of our present position."

In working for improvement, it should be not merely for gentleness, color, or purity of breed, but rather for best results in storing.

The best part of his article appears on another page this week.

Needs Laxative Nervo-Vital Tablets.—Editor Leahy is in "pain" because the advertisement of the Modern Remedy Co. is running in this journal, and says "the 'Old Reliable' gives space to a 'quack.'" Mr. Leahy, if you will read carefully the advertisement, you will find in it the following words: "We give the formula with every box. You know exactly what you are taking." When the ingredients of a remedy are given in full, it is not customary to denominate such remedies as "quack" remedies, nor the compounder as a "quack." If it were, then no physician or druggist would be free from the title of "quack." Better send for a free sample of the remedy, Mr. Leahy, and perhaps it will relieve you of some surplus bile.

Editor Leahy closes his painful editorial with these strange words:

"I do not believe I should enjoy paying \$200 a year for an advertisement in a publication that would sell some one else three times the space for only \$50 to ask me each week if I was full of ginger, or had the blues."

Editor Leahy, in the words quoted, does not say in plain terms that he would have to pay twelve times as much for advertising as do the Modern Remedy Co., but it can so easily be understood to bear that meaning, that we commend to our contemporary an ancient injunction which reads: "Thou shalt not bear false witness against thy neighbor."

The National Convention Next Month—don't forget it. The dates are Aug. 28, 29 and 30. The place—Chicago.

The Weekly Budget

MR. HARRY LATHROP, of Green Co., Wis., writing us July 8th, said:

"Our honey-yield has been fair, and is still coming, but basswood was cut short by storms."

CLOSED SATURDAY AFTERNOONS.—Those who might desire to call at the office of the *American Bee Journal* on Saturday afternoons during July, August, and September, will please remember that the office will be closed then. It is the custom of this office to close up during the time mentioned. We all need a little fresh air, and decided that there is no better time to take it in the whole year. So please call at any other time than that mentioned above.

MR. JOHN CALVERT, business manager of The A. I. Root Co., sailed for Europe July 3, going with the *Christian Endeavor* hosts to the International convention in London. Here is what he said further about his trip across the water:

"After spending ten days in London and vicinity we sail to Antwerp, and spend three weeks on the continent, visiting points of interest in Belgium, Germany, Switzerland, and the World's Fair in Paris. Returning to Great Britain we spend about three weeks longer visiting business acquaintances and friends, and may also attend the International Bee-Keepers' Congress in Paris in September."

AN ERROR CORRECTED.—Some time ago we published an item from a California newspaper which said that a Mr. Crowder, in that State, had 3,000 colonies of bees. Editor Root questioned the correctness of the statement, and so Mr. John H. Martin investigated the matter, reporting his finding in this paragraph in *Gleanings in Bee-Culture*:

"About that Mr. Crowder and his 3,000 colonies of bees, the statement of which was published in the *American Bee Journal*, and quoted from a Tulare paper. I am informed by parties who live near Mr. Crowder, that he has only about 800 colonies. The 3,000 story was a sensational and gross exaggeration."

We are glad to be able to make the correction, and can only regret having published the erroneous figures in the first place. However, as doubtless no real harm has resulted, perhaps we may be forgiven this time—provided we promise not to do it again.

ONE ON HASTY.—Like Bro. Doolittle's old Dutchman, I should like to "arise and ask" what's the matter with E. E. Hasty? Let me quote what he says on page 343, *American Bee Journal*: "Your best girl, if rescued from the ruins of a house wreckt by a tornado." That's a whole romance in a nutshell. When a staid old bachelor like Hasty gets to raving about best girls and tornadoes, there's something worse than a tornado behind it. Yes, sir; it is a strong indication of matrimony. Didn't think that of you, Bro. Hasty (tears, onions in my handkerchief).—J. H. MARTIN, in *Gleanings in Bee-Culture*.

Now, that's a pretty how d' ye do. First thing we know, both of them—Hasty and Martin—will be "taken in" by "best girls." Then there *will be* tornadoes and sich like. But, then, any man—or two men—that will persist in going it alone as long as Hasty and Martin have been at it, deserves a good shake up. And if it takes two "best girls" to do it—and they do it well—we'll hurrah for the "best girls." (Please signal us when it's time to hurrah.)

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

H. G. Quirin, the Queen-Breeder,
Is as usual again on hand with his
improved strain of

✦GOLDEN✦ ITALIAN QUEENS.

Our largest orders come from old customers, which proves that our stock gives satisfaction. We have 12 years' experience in rearing queens, and if there is any one thing we pride ourselves in, it is in sending all queens promptly **BY RETURN MAIL**. We guarantee safe delivery.

Price of Queens after July 1.	1	6	12
Warranted.....	\$.50	\$ 2.75	\$ 5.00
Selected warranted.....	.75	4.00	7.00
Tested.....	1.00	5.00	9.00
Selected tested.....	1.50	8.00	
Extra selected tested, the best that money can buy.....	3.00		

Address all orders to

H. G. QUIRIN, Parkerstown, Erie County, Ohio.
(Money Order Office, Bellevue, O.)

23A14t Please mention the Bee Journal.

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BEE-BOOK

That covers the whole Apicultural Field more completely than any other publication, send \$1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keepers' Guide.

Liberal Discounts to the Trade.



Best on Earth

What? Our New Champion Winter-Case. And to introduce it thruout the United States and Canada we will sell them at a liberal discount until Oct. 15, 1900. Send for quotations. We are also headquarters for the No-Drip Shipping-Cases.

R. H. SCHMIDT & CO.

Sheboygan, Wisconsin.

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POUNDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free. **WALTER S. POWDER,**
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E. P. SKENE, Land Commissioner,

Ill. Cent. R.R. Co., Park Row, Room 413,
24A24t CHICAGO, ILL.

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GENERAL ITEMS

There's Music in the Air To-Day.

BY DAVID HALL.

Oh! there's music in the air to-day, for in the forest near,
The lindens are in blossom and the bees
Are making that glad murmur so delightful to the ear—
Dear as the sweetest choral symphonies.

From each hive they're rushing wildly in their eagerness to win
The wealth within those nectar-laden flowers;
And toiling home with weary wing, just see them tumble in—
From early morn till twilight's golden hours.

How it warms the heart and stirs the pulse, at such a scene as this,
And the bee-keeper who has not felt its power
Has not yet attained that eminence in earthly bliss
Which the buoyant heart demands in such an hour.

Then, woodman, spare the linden-tree, preserve its generous shade.
Its beauteous form now waving in the breeze;
For memories dear come back to me, how I in childhood played
There, listening to the humming of the bees.

Wyoming Co., N. Y., July 8.

Alfalfa as a Honey-Plant.

Referring to Australian honey-plants, on page 425, lucerne or alfalfa is mentioned as not yielding any honey until the third year. That is true for this (Atchison) county. Three years ago I sowed some alfalfa south of my apiary, but I have not at any time seen on it over 10 bees to the acre, and I have kept close watch, too, because this field is where I pass along several times very nearly every day, if I am at home. Alfalfa is on both sides the road, but this year, from the second crop of alfalfa the air is scented and full of bees humming going from and to the patch.

There was much white clover here this year, in my bee-range, there being about 1,000 acres, counting 1½ miles each way. This is a good honey-year for my bees.

ALBERT WILTZ.

Atchison Co., Kan., July 9.

Light White Honey Crop.

The white honey crop is going to be quite light in this vicinity. Basswood was full of bloom, but yielded little nectar. White clover is coming up quite profusely since the heavy rains, and may yield some honey. I am looking for a good fall flow.

C. H. STORDOCK.

Winnebago Co., Ill., July 11.

Introducing a Capt Queen-Cell.

Often the question is asked, how can I introduce to a queenless colony a capt queen-cell, and protect it from being torn down? The best plan that I know of, and I've tried more than one, is to take a wire-cloth cone—such as is used in bee-escapes—and carefully insert the queen-cell, so that the capping shall just protrude thru the apex of the cone; then carefully fold the corners together and give the points a twist so that they will not separate, and you have a protector that is complete.

Place the cell thus protected between

Sharples Cream Separators: Profitable Dairying

Belgian Hares!

IMPORTED

Pedigreed Stock!



Does bred to imported Bucks, \$25.00 and up. Young from imported, \$6.00 and up.

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DITTMER'S FOUNDATION

Wholesale and Retail

This foundation is made by an absolutely non-dipping process, thereby producing a perfectly clear and pliable foundation that retains the odor and color of beeswax, and is free from dirt.

Working wax into foundation for cash, a specialty. Write for samples and prices. A full line of Supplies at the very lowest prices, and in any quantity. Best quality and prompt shipment. Send for large, illustrated catalog.

GUS. DITTMER, Augusta, Wis.

Beeswax Wanted.

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PATENT WIRED COMB FOUNDATION

Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation

Has no Fishbone in the Surplus

Honey.

Being the cleanest is usually work the quickest of any foundation made.

J. A. VAN DEUSEN,

Sole Manufacturer,

Sprout Brook, Montgomery Co., N.Y.

Please mention Bee Journal when writing.

The Emerson Binder



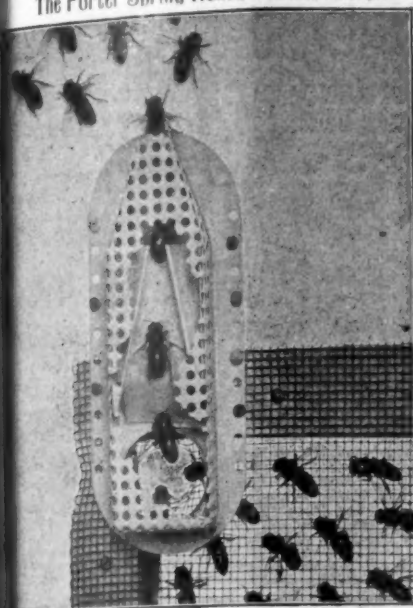
This Emerson stiff-board Binder with cloth back for the American Bee Journal we mail for but 60 cents; or we will send it with the Bee Journal for one year—both for only \$1.40. It is a fine thing to preserve the copies of the Journal as fast as they are received. If you have this "Emerson" no further binding is necessary.

GEORGE W YORK & CO.

118 Michigan Street,

CHICAGO, ILL.

The Porter Spring Honey-House Escape

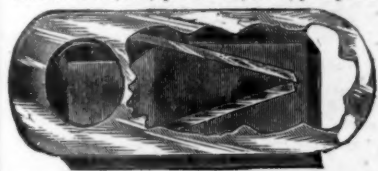


Shown in use on a window screen, reduced in size one-half, and having a part of the exterior broken away to give a view of the springs, is a perfect device for getting the bees out of extracting-rooms, house-aparies, piles of supers, etc. It permits the bees to pass out thru it easily and rapidly, yet it absolutely prevents their return or the entrance of the most persistent robbers. Without a trial it is difficult to realize its value to the apiarist.

Mr. Kretschmer says of it: "I hasten to express to you my admiration for an article I have been waiting for so long a time. It is just the thing." And all who have used it similarly commend it.

DIRECTIONS.—Tack the escapes as shown in the engraving over holes punctured thru the wire cloth at the upper corners of each window on which they are to be used, or over holes bored wherever convenient, if the enclosure is without windows.

PRICES: Each, 25c; per dozen, \$2.75, postpaid.



The Porter Spring Hive-Escape for getting the bees out of the super automatically before removal from the hive, which is similar to the escape shown above, is one of the most popular and useful apicultural implements of the day, and its friends have been gained by substantial merit alone. At the Columbian Exposition it won the highest and only award given an escape. Leading bee-keepers the world over use these escapes and give them their unqualified endorsement. Directions for use with each escape.

A Few Extracts from Testimonials:

They are perfect in action.—British Bee Journal.

I would not do without them if they cost \$5.00 apiece.—Wm. Muth-Rasmussen, Independence, Calif.

Bee-men are certainly behind the times if they can afford to use them and do not.—M. H. Mendleson, Ventura, Calif.

We cannot too highly recommend them. We intend to use them in all our apiaries hereafter.—Chas. Dadant & Son, Hamilton, Ill.

I have 85 of them in use and don't see how I could possibly get along without them.—John Nippert, Phoenix, Ariz.

The most sting-proof bee-keeper will appreciate the Porter Bee-Escape with the first attempt and place it among the indispensables of the apiary.—Chas. F. Muth, in American Bee Journal.

The Porter Bee-Escape clears the super of bees so quickly and perfectly and easily that it makes the taking-off of honey a pleasure instead of a dread as in former years.—G. M. Doolittle, Borodino, N. Y.

PRICES: Each, 25c; per dozen, \$2.25, postpaid. Order of your dealer, or of

THE A. I. ROOT CO., Medina, Ohio,
General Agents for the U. S.

the top-bars in the center of the colony, properly cover it up, and in due time the young queen will emerge and be accepted. I've introduced many in this manner, and have yet to record a failure. The cones can be made by any one, about as fast as he can count, if he is a little slow in counting.

We have a bee-keeper in this town who told me a few days ago that he once ate 3 pounds and 8 ounces of honey at a sitting. Next.

WM. M. WHITNEY.

Kankakee Co., Ill.

Not Much Surplus Honey.

There has not been much surplus honey gathered in this neighborhood. Bees swarmed freely the last of May and the first part of June. We had no rain for about a month, so there has been no nectar for them to find of late. The first growth of alfalfa the bees did not work on, and the second growth with rain does not seem to yield much, but on buckwheat bloom the bees are very busy. But how the supers will be is hard to tell.

Comb honey sells from 15 to 20 cents a pound, and very little found at those prices.

R. C. SUPPE.

Woodson Co., Kans., July 10.

Not a Fourth of a Crop.

I am sorry to say that the honey harvest is over here, and we have not harvested $\frac{1}{4}$ of a crop. The last week of hot weather with high wind has dried up all white clover, and there are no prospects for any fall honey of any kind. Bees swarmed very little—out of 215 colonies I had only about 20 swarms. Bees are idle now.

N. STAININGER.

Cedar Co., Iowa, July 9.

Severe Drouth in Minnesota.

We have past thru the severest drouth Minnesota has ever experienced. The rains have come now, and will help us out in a good many things, but is too late for wheat and oats, also for honey. Basswood is nearly over, and it yielded very little honey. The most

If You Want Bees

That will just "roll" in the honey, try Moore's Strain of Italians, the result of 21 years of careful breeding. They have become noted for honey-gathering, whiteness of cappings, etc., thruout the United States and Canada.

Warranted Queens, 75c each; 6 for \$4.00; 12 for \$7.50. Select warranted, \$1.00 each; 6 for \$5.00; 12 for \$9.00. Strong 3-frame Nucleus with warranted Queen, \$2.50. Safe arrival and satisfaction guaranteed. Circular free.

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Queen-Clipping Device Free...

The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at \$1.00; or for \$1.10 we will mail the Bee Journal one year

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GEORGE W. YORK & COMPANY,
118 Michigan St., Chicago, Ill.

Albino Queens

by return mail. Un-
tested, 75
cts.; war-
ranted, \$1.00; tested, \$1.25.

12A26t J. D. GIVENS, LISBON, TEX.

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Belgian Hares

Pedigreed and Unpedigreed Hares, any age, for sale.

J. S. MESSICK,

LIBERTY, - MISSOURI.

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Bees for Sale

PRIME
STOCK.
NO DIS-
EASE.

Write for prices. H. Lathrop, Browntown, Wis.

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SELL ROOT'S GOODS AT ROOT'S PRICES. Our inducements are first-class goods, cheap freight rates, and prompt shipments. Send for catalog.

BELL BRANCH, MICH.

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Second-Hand 60-pound Tin Cans Cheap!



We have a stock of second-hand 60-pound Tin Cans, put up two in a box, which are practically as good as new, each can having been carefully inspected by an expert honeyman before boxing them. While they last, we can furnish them at these low prices—just about one-half the cost of new cans:

10 boxes (or 20 cans) 50 cents per box; 20 boxes or over, 45 cents per box; 100 boxes or over, 40 cents per box.

Address, cash with order,

GEORGE W. YORK & CO.

118 Michigan Street, CHICAGO, ILL.

Northern Italian Queens!

Reared by the best methods from my GREAT HONEY-GATHERERS. Price, \$1 each. Orders for queens to be filled in rotation beginning June 1st. Ready to book orders NOW.

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RICHLAND CENTER, WIS.

Italian Queens!

reared from the best 3-band honey-gatherers, by the Doolittle method. Untested, 45 cents each; 1 dozen, \$4.50. Tested, 75 cents each; 2-frame Nucleus, with tested queen, \$1.75 each. No disease. Safe arrival.

W. J. FOREHAND,

19D12t FORT DEPOSIT, ALA.

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Or, Manual of the Apiary,

—BY—
PROF. A. J. COOK.

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A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book published to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipped, or his library complete, without THE BEE-KEEPER'S GUIDE.

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BY RETURN MAIL.

Golden Beauty Italian Queens,
Reared from imported mothers.

Untested, 50 cts.; 12 Untested, \$5.50; Tested, \$1.
J. S. TERRAL & CO., Lampasas, Texas.
18A1f Please mention the Bee Journal.

of the fall honey-plants are dead. If the bees get enough for their own use I will be thankful. E. B. LANGDON.
Douglas Co., Minn., July 7.

May Have to Feed for Winter.

Up to June 12 bees flourished well, and stored a large amount of honey. As sourwood is not yielding nectar I am thinking that bee-keepers in tide-water Virginia will be compelled to feed for the coming winter, as I have to do when that source fails, and that has failed for the past 3 years.

I think that my bees are thru swarming, as I have not had any issue to-day. My spring count was 29 colonies, increased to 87, and I had several swarms go to the woods.

J. H. ALLEN.
Nansemond Co., Va., July 2.

A Queer Season for Bees.

This is a queer season. In early spring the bees gathered considerable honey, and they gather some yet, but it is rainy nearly every day, so the hives do not fill up very fast. The willow-herb is in full bloom now, fully a month earlier than usual.

HANS CHRISTENSEN.
Skagit Co., Wash., July 6.

Not a Favorable Season.

The season has not turned out as favorably as the early spring promise. June came first cool and dry, then hot, dry and windy. This pushed the bloom ahead rapidly, and while the season was short it did not yield heavy either, as is sometimes the case under such circumstances. Sweet clover, which usually begins to bloom about June 20th, is now almost ripe, the earliest I ever knew it to dry up. Basswood was

\$5.00 per month will pay for medical treatment for any reader of the American Bee Journal. This offer is good for 3 months ONLY—from May 1 to Aug. 1. Dr. Peiro makes this special offer to test the virtue of small price for best medical services. Reply AT ONCE.

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—AND—
Journal of Agriculture,
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A wide-awake, practical Western paper for wide-awake, practical Western farmers, stock-raisers, poultry people and fruit-growers, to learn the science of breeding, feeding and management. Special departments for horses, cattle, hogs, sheep, poultry and dairy. No farmer can afford to do without it.

It stands for American farmers and producers. It is the leading exponent of agriculture as a business, and at the same time the champion of the Agricultural States and the producer in politics. Subscription, One Dollar a Year.

Write for Sample Copy

Adel Queens, \$1 Each.

Send postal for dozen rates and description of bees. HENRY ALLEY, Wenham, Mass.
23A1f Mention the American Bee Journal.

Seasonable Offerings Golden Yellow Italian Queens

Now is the time to improve your strain of bees. The Queens I offer are the finest in the land. I sold quite a number this season and all are delighted with the quality and so will you be, at 75 cents each, by return mail.

60-pound Cans, two to Crate.

I have 400 crates of two 60-pound cans each that were used once, and are nearly as good as new. I offer until this lot is exhausted at 5c per crate, or 10 crates at 45c each. New crates of two 60-pound cans each cost 85c. Speak quick. Root's goods at Root's prices, also Muth's Jars. Send for Catalog. HONEY AND BEESWAX WANTED. C. H. W. WEBER,
2146 Central Ave., Cincinnati, Ohio.

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NERVO-VITAL TABLETS

It contains no narcotics nor bromides nor other injurious drugs. We give the formula with every box. You know exactly what you are taking. Originally put up for physicians' use. Ask your druggist for a

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If he hasn't it, don't take a substitute, but send us a stamp for our book on "Health" and we will send you a free sample, sufficient for you to try it and test its merits to your own satisfaction. Isn't it worth trying free? It positively cures. Price 10c and 25c per box. Don't delay sending.

The Modern Remedy Co., Kewanee, Ill.

also short, but not very "sweet," so our honey crop will be light this year.
E. S. MILES.
Crawford Co., Iowa, July 9.

Hardly Making a Living.

Bees are hardly making a living with basswood in bloom. They are working on over-ripe strawberries and red raspberries.
J. W. PARKER.
Onondaga Co., N. Y., July 7.

Basswood Almost a Failure.

Bees are doing well here on white clover, but basswood bloom has been almost a failure, on account of the cold and wet weather during its blooming time, which was of short duration this year.
N. YOUNG.
Hardin Co., Iowa, July 9.

A Short Report.

I started in the spring with 6 colonies in 8-frame single-story hives, and one colony in a two-story one. I divided them so as to give each hive four combs of brood and honey, or simply took one-half out, and put it into another hive, making 16 colonies in all. I have 16 strong colonies, and have taken 112 pounds of salable section honey; 14 colonies work in the sections well, but 2 won't work in them at all. I have baited them with partly filled sections, and the bees carry the honey down in the brood-chamber. The combs there seem to have plenty of honey in them.
FRED TYLER.
Mason Co., Ill., July 9.

A Thankful Bee-Keeper.

This report is a little premature, as our honey-flow is not over yet, but I am so thankful for what I have got so far that I could not wait any longer. The season here in fruit-bloom was perfect for the bees, and they filled the hives to overflowing, and increased wonderfully fast: but after that, until June 23d, they did nothing. On June 21st I found 3 colonies that had not one bit of honey in their hives, so I fed them on that date and the day after. There was no white clover here. On June 24th I found that there was some honey coming in, and on that date I put a hive on the scales, the record being as follows:

June 25.....	gain 5½ pounds
" 26.....	" 5½ "
" 27.....	" 5½ "
" 28.....	" 6 "
" 29.....	" 4 "
" 30.....	" 3¾ "
July 2.....	" 5 "
" 3.....	" 4 "
" 4.....	" 5½ "
" 5.....	" 5 "
Total.....	50¾ "

While this is no great yield, I think it is pretty good when the sugar-barrel in the fall was staring me in the face, for we have no fall flow in this vicinity. Basswood did a little here, and there was some alsike a mile or so away, but 2½ miles from here there is 17 acres of white clover that I am told the owner is going to let go to seed, and then cut it. It is a new venture with him, but he thinks it will yield between four and five bushels of seed to the acre. I think

SPECIAL NOTICE!

Last winter's cut of basswood is the whitest it has been for many seasons. We are now making sections out of this new stock and therefore are in a position to furnish you with the very finest quality in the market.

LEWIS WHITE-POLISHT SECTIONS

Are perfect in workmanship and color.

Orders shipped immediately upon receipt. A complete line of everything needed in the apiary. Five different styles of Bee-Hives.

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Special Southwestern Agent.

SEND FOR CATALOG.

Four Celluloid Queen-Buttons Free AS A PREMIUM.



For sending us ONE NEW SUBSCRIBER to the Bee Journal for the balance of this year, with 50 cents, we will mail you FOUR of these pretty buttons for wearing on the coat-lapel. (You can wear one and give the others to the children.) The queen



has a golden tinge. This offer is made only to our present regular subscribers.

NOTE.—One reader writes: "I have every reason to believe that it would be a very good idea for every bee-keeper to wear one [of the buttons] as it will cause people to ask questions about the busy bee, and many a conversation thus started would wind up with the sale of more or less honey; at any rate, it would give the bee-keeper a superior opportunity to enlighten many a person in regard to honey and bees."

Prices of Buttons alone, postpaid: One button, 8 cts.; 2 buttons, 6 cts. each; 5 or more, 5 cts. each. (Stamps taken.) Address,

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QUEENS!

Untested Queens, Italian, 60 cents. Tested, \$1.00.

From honey-gathering stock.

We keep in stock a full line of popular Apiarian Supplies. Catalog free.

Apiaries—Glen Cove, L. I. I. J. STRINGHAM, 105 Park Place, New York, N. Y.

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Sent by Express, for \$1.50; or with the Bee Journal one year—both for \$2.00.

Every Manufacturer, Miller, Carpenter, Cabinet Maker, Machinist, Wheelwright and Quarryman, Farmer, or any one using a grindstone, should have one of these Tool-Holders. One boy can do the work of two persons, and grind much faster, easier and with perfect accuracy. Will hold any kind of tool, from the smallest chisel to a draw shave or ax. Extra attachment for sharpening scythe blades included in the above price. The work is done without wetting the hands or soiling the clothes, as the water flows from the operator. It can be attached to any size stone for hand or steam power, is always ready for use, nothing to get out of order, and is absolutely worth 100 times its cost. No farm is well-equipped unless it has a Tool-Holder. Pays for itself in a short time.

How to Use the Holder.

DIRECTIONS.—The Tool is fastened securely in the Holder by a set-screw and can be ground to any desired bevel by inserting the arm of the Holder into a higher or lower notch of the standard. While turning the crank with the right hand, the left rests on an steadies the Holder; the Tool is moved to the right or left across the stone, or examined while grinding, as readily and in the same way as if held in the hands.

For grinding Round-Edge Tools, the holes in the standard are used instead of the notches.

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High Grade Italian Queens



One Untested Queen.....\$.60
One Tested Queen..... .80
One Select Tested Queen 1.00
One Breeder..... 1.50
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27 Years Rearing Queens for the Trade.

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14Atf CLARINDA, Page Co., IOWA.
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Italian Queens.

	1	3	6
Untested Queens.....	\$0.90	\$2.50	\$4.50
Select Untested Queens.....	1.25	3.25	6.00
Tested Queens.....	1.25	3.50	7.00
Select Tested Queens.....	2.00	5.00	9.00

These Queens are reared from honey-gatherers. Orders filled in rotation. Nothing sent out but beautiful Queens.

27A5t D. J. BLOCHER, Pearl City, Ill.
Please mention Bee Journal when writing.



There is a Great Difference

between "hard wire" and "Page Wire."
PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.
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Second-Class Queens.

(What Becomes of Them?)

As to color of progeny there are some tested queens that are second-class, that are equal to any for business. That is, 3-band bees predominate in the offspring of golden mothers. These are sold at 50 cents each. If 5-band bees predominate, and do not exceed 80 percent, they are worth \$1.00; above this and not to exceed 95 percent, \$1.25; all of a higher grade and not uniformly marked, \$1.50 each; while first-class breeders are placed at only \$2.00.

Untested, either 3 or 5-band, 75c each; or 3 for \$2.00. Money order office, Warrenton, N. C.

W. H. PRIDGEN,

24Atf Creek, Warren Co., N.C.
Please mention Bee Journal when writing.

Yellow Sweet Clover Seed

WE HAVE IT AT LAST!

We have finally succeeded in getting a SMALL quantity of the seed of the YELLOW variety of sweet clover. This kind blooms from two to four weeks earlier than the common or white variety of sweet clover. It also grows much shorter, only about two feet in height. It is as much visited by the bees as the white, and usually comes into bloom ahead of white clover and basswood. We offer the seed as a premium

A QUARTER POUND FOR SENDING ONE NEW SUBSCRIPTION.

So long as it lasts, we will mail a quarter pound of the seed to a regular paid-up subscriber who sends us ONE NEW subscriber for the American Bee Journal one year, with \$1.00; or ¼ pound by mail for 30 cents.

We have been trying for years to secure this seed, and finally succeeded in getting it. It is new seed, gathered last season by an old personal friend of ours, so we know it is all right. But we have only a small supply. When nearly out we will mention it.

GEORGE W. YORK & CO.,

118 Michigan St., - CHICAGO, ILL.

Please mention Bee Journal when writing advertisers.

it will be a paying crop. The owner is not a bee-keeper, but he tells me the field is perfectly alive with bees, and when a storm comes up here, and the bees come home in a hurry, it seems they nearly all come from his direction, and as I know there is no bee-pasturage between my apiary and his field of white clover, I presume there is where some of my honey has come from.

I have been bothered with only a couple of swarms so far, and do not now expect any more. In fact, I am never bothered much with swarming for some reason. Altho I run for comb honey, my experience is at variance with others who have excessive swarming.

Well, I am thankful for what honey I have secured, and I do not have to feed this fall, as the prospect for so doing was so fair for the last month before the flow came.

The omission of weight on July 1st was caused by adding another case of 30 sections, it being a 10-frame hive.

One thing I have found out is, that it is as Mr. E. R. Root says, the double-deckers are not so good for comb honey until the deck is taken off at the commencement of the flow.

CHAUNCEY REYNOLDS.

Sandusky Co., Ohio, July 6.

Bees Hatching Hens' Eggs.

I have been using the plan of having the bees hatch hens' eggs all spring, and it is all that I have claimed for it. Out of 100, and perhaps a dozen more fertile eggs, every one hatcht a good, strong chick, no crooked legs or half-dead ones. I have applied, and shall have the plan before the public before next spring. It will be very cheap, and any bee-keeper can use it without much extra expense, as the bees are not interrupted in the least. I use a chaff hive for the purpose, with chaff cushions, which act as a hen, and the eggs are placed above the bees, where they are kept warm from Feb. 15th till late in the fall. I think after a person tries this plan he will have no use for complicated incubators or cross sitting-hens. I have had the plan in mind for three or four years, but this is the first time I have tested it, and I have never heard of it being used by any one before.

JOHN G. NORTON.

McDonough Co., Ill., July 5.

The Glucose Yarn Still Going.

I clip the following from a paper, it having been written by J. S. Trigg, Iowa's most noted agricultural writer:

"Now here is a sweet, mean trick if ever there was one. A man in an eastern town keeps a lot of bees, and has discovered that if the bees can get glucose to eat they will not bother to forage for the sweets of the flowers, but will work most industriously filling the ready-made comb furnished with glucose honey!"

Of course, Mr. Trigg got the idea from the article referred to several times in the American Bee Journal.

25 cents Cash paid for Beeswax.

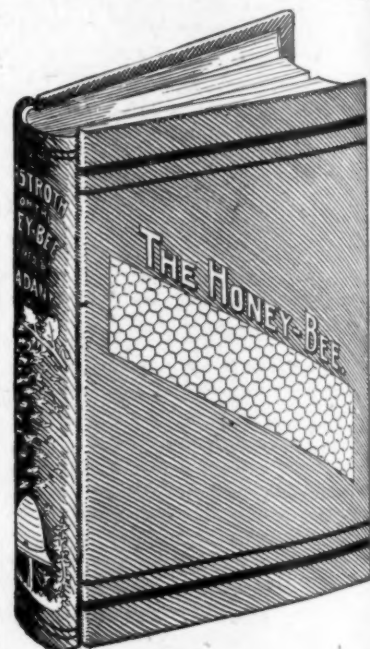
low, upon its receipt, or 28 cents in trade. Impure wax not taken at any price.
Address as follows, very plainly,
GEORGE W. YORK & CO., 118 Michigan St., CHICAGO.

Langstroth on The Honey-Bee

Revised by Dadant—1899 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the American Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroughly explained, so that by following the instructions of this book one cannot fail to be wonderfully helped on the way to success with bees.

The book we mail for \$1.25, or club it with the American Bee Journal for



one year—both for \$1.75; or, we will mail it as a premium for sending us THREE NEW subscribers to the Bee Journal for one year, with \$3.00.

This is a splendid chance to get a grand bee-book for a very little money or work.

GEORGE W. YORK & CO.

118 Michigan Street, - CHICAGO, ILL.

Queens

UNTESTED ITALIAN, 50 cents each; tested, \$1 each. Queens large, yellow and prolific. Circular free.

21Atf Address, E. W. HAAO, Canton, Ohio.
Please mention Bee Journal when writing.

The tone of the clipping indicates that he is credulous in regard to the new discovery (?), and is intent upon giving it wide circulation. I have explained the matter the best I could in one of our county papers, but the lie is traveling fast.

Last week, when I was delivering some honey to one of my customers (a country merchant), the dealer said: "I hear a new method has been discovered for making honey so that the bees do not have to depend upon the flowers."

Suspecting what was coming, I asked, "Is that so? Why, how is it done? I am anxious to keep up with the times, and learn all the new methods."

He replied, "Why, J. S. Trigg says all you have to do is to feed the bees plenty of glucose, and they won't go near a flower."

Of course, I told him I had read Mr. Trigg's article, and explained how the story originated, etc.

But that is only one out of thousands who will read and believe the falsehood. I think all bee-keepers should take particular pains to set the matter right, not only by talking it to their customers, but thru their local newspapers.

My bees are doing fairly well on white clover yet. I am trying to keep down swarming, but I have 11 new swarms, the most of them issuing before the middle of June, from 25 old colonies. Nearly all are working in the sections, and quite a number are filling their third super of 24 sections.

Not long since I saw the statement (I am unable just now to find the page) that a good-sized swarm of 30,000 bees should weigh about 5½ pounds. I have weighed a number of prime swarms this season, and the lightest was 5 pounds, and they run from that to 8 pounds and 2 ounces. I use the 8-frame hive.

A. F. FOOTE.

Mitchell Co., Iowa, July 2.

American Enterprise at Paris.—Among the striking and original exhibits at the Paris Exposition of 1900 few have occasioned more favorable comment than the great map of the United States, 18x15 feet, exhibited by the well known advertising agency of Lord & Thomas, Chicago and New York. This map is constructed to show at a glance the various details concerning state areas and population, number of publications in each, circulation per issue, percentage of circulation to population, value of publishing plants, number of employees, average hours of labor, average wages paid and average cost per inch for yearly advertising. Information of this nature is of especial value to advertisers, showing as it does the best locations in which to place advertising to reach the greatest number of people and secure best results.

The firm of Lord & Thomas has been engaged in the general advertising business for over 30 years, and ranks among the largest in its line. They prepare advertisements for all classes of advertisers and place them in publications.

Copies of this valuable map will be sent free on request to all advertisers who address Lord & Thomas, Trade Building, Chicago.

California Queens.

OF PURE ITALIAN STOCK.

(THREE-BANDED.)

No other bees within a radius of TEN MILES. Eight years' experience in practical bee-keeping. Untested Queens, 90 cts. each; \$9 per doz. Discounts after July 1. Write for price-list. 18A13t

H. L. WEEMS, Hanford, Calif.

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BEE-BOOKS

SENT POSTPAID BY

George W. York & Co., 118 Mich. St. Chicago.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages, beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, in cloth, 75 cents; in paper, 50 cents.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, \$1.25.

Bee-Keepers' Guide, or Manual of the Apisry, by Prof. A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages, bound in cloth and fully illustrated. Price, \$1.25.

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, \$1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopaedia of 400 pages, describing everything pertaining to the care of the honey-bees. Contains 300 engravings. It was written especially for beginners. Bound in cloth. Price, \$1.20.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages, bound in paper, and illustrated. Price, 50 cents.

Rational Bee-Keeping, by Dr. John Dzierzon.—This is a translation of his latest German book on bee-culture. It has 350 pages, bound in paper covers, \$1.00.

Bienen-Kultur, by Thos. G. Newman.—This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Bienenzucht und Honiggewinnung, nach der neuesten methode (German) by J. F. Eggers.—This book gives the latest and most approved methods of bee-keeping in an easy, comprehensive style, with illustrations to suit the subject. 50 pages, board cover. Price, 50 cents.

Bee-Keeping for Beginners, by Dr. J. P. H. Brown, of Georgia.—A practical and condensed treatise on the honey-bee, giving the best modes of management in order to secure the most profit. 110 pages, bound in paper. Price, 50 cts.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 pages, illustrated. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, \$1.00; for 100 colonies, \$1.25.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. 30 cts.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. Price, 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 10 cents.

Capons and Caponizing, by Dr. Sawyer, Fanny Field, and others.—Illustrated. All about caponizing fowls, and thus how to make the most money in poultry-raising. 64 pages. Price, 20c.

Our Poultry Doctor, or Health in the Poultry Yard and How to Cure Sick Fowls, by Fanny Field.—Everything about Poultry Diseases and their Cure. 64 pages. Price, 20 cents.

Poultry for Market and Poultry for Profit, by Fanny Field.—Tells everything about Poultry Business. 64 pages. Price, 20 cents.

BEEES QUEENS
Smokers, Sections,
Comb Foundation
And all Apian Supplies
cheap. Send for
FREE Catalogue. E. T. FLANAGAN, Belleville, Ill.
Please mention Bee Journal when writing.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, July 7.—Some new white comb honey is selling at 15c; not much offered and not much demand for it. Extracted is slow sale; best white, 7@7½c; best amber, 6½@6¾c; dark amber, 5@5½c. Beeswax, 27@28c.

R. A. BURNETT & Co.

CINCINNATI, July 2.—This market is completely bare of comb honey. The demand for extracted honey is good. Several good shipments of extracted honey from Mississippi and Arkansas have arrived and found a ready sale at 6½@7½c. No white clover honey on the market; same would bring about 8c. Beeswax, 25@26c.

C. H. W. WEBER, 2146 Central Ave.

BUFFALO, June 20.—For strictly fancy white one-pound comb honey we are getting 16@17c. Any grade sells high—10@15c, as to grade.

BATTERSON & Co.

KANSAS CITY, June 20.—We quote: No. 1 white comb, 14@15c; No. 1 amber, 13@14c; No. 2 white and amber, 13@13½c. Extracted, white, 7½@8c; amber, 7c. No beeswax in the market.

We have a shipment of new comb honey in transit from Florida. The supply of old comb honey is very light, mostly candied.

C. C. CLEMONS & Co.

DETROIT, May 24.—Fancy white comb, 15@16c; No. 1, white, 14@15c; amber and dark, 10@12c. Extracted, white, 7c; amber and dark, 5@6c. Beeswax, 25@26c.

Supply and demand for honey both limited.

M. H. HUNT & SON.

NEW YORK, May 21.—Our market is practically bare of comb honey, and there is a good demand for white at from 13@15c per pound, according to quality and style of package. The market on extracted is rather quiet, and inactive. New crop is slow in coming in, and prices have not yet been established. Beeswax holds firm at 27@28c.

HILDRETH & SEGELKEN.

SAN FRANCISCO, July 3.—White comb, 12@12½c; amber, 8@10c. Extracted, white, 6½@7c. light amber, 5½@6½c; amber, 5½@5¾c; Beeswax, 26@27c.

The market is fairly supplied with amber extracted, which is arriving mainly from the San Joaquin section, and is meeting with a moderate demand at current rates, both for shipment and local use. Water white honey is scarce, either comb or extracted. Choice comb is inquired for, and in a small way is salable over figures warranted as a regular quotation.

WANTED—HONEY AND BEESWAX.

We have a tremendous and growing trade in this line, and would like to hear from all who have such goods to sell in any part of the country, with quality, description, and lowest cash price. THOS. C. STANLEY & SON, Fairfield, Ill.

WANTED COMB HONEY AND EXTRACTED HONEY.

Will buy your honey, no matter what quantity. Mail sample with your price expected delivered in Cincinnati. I pay cash on delivery. C. H. W. WEBER, 2146 Central Ave., CINCINNATI, OHIO.

Belgian Hare Guide AND DIRECTORY OF Inland Poultry Journal Co., Indianapolis, Ind.

Please mention Bee Journal when writing.

MARQUETTE, ON LAKE SUPERIOR,

is one of the most charming summer resorts reached via the Chicago, Milwaukee & St. Paul Railway.

Its healthful location, beautiful scenery, good hotels and complete immunity from hay fever, make a summer outing at Marquette, Mich., very attractive from the standpoint of health, rest and comfort.

For a copy of "The Lake Superior Country," containing a description of Marquette and the copper country, address, with four (4) cents in stamps to pay postage, Geo. H. Heafford, General Passenger Agent, Chicago, Ill. ☐ ☐

We have a Large Stock on hand
and can ship promptly.

SEND US YOUR ORDERS FOR

Hives, Extractors

OR ANYTHING YOU WANT IN THE
BEE-KEEPING LINE.

WE MAKE ONLY THE BEST.

Our Falcon Sections and New Process Foundation are ahead of everything, and cost no more than other makes. New Catalog and copy of THE AMERICAN BEE-KEEPER free. Address,

THE W. T. FALCONER MFG. CO.,
JAMESTOWN, N. Y.

W. M. GERRISH, East Nottingham, N. H., carries a full line of our goods at catalog prices. Order of him and save freight.

Please mention Bee Journal when writing.

MADE TO ORDER.

BINGHAM

BRASS

SMOKERS

made of sheet-brass which does not rust or burn out should last a life-time. You need one, but they cost 25 cents more than tin of the same size. The little pen cut shows our brass hinge put on the three larger sizes.



No wonder Bingham's 4-inch Smoke Engine goes without puffing and does not

DROP INKY DROPS.

The perforated steel fire-grate has 381 holes to air the fuel and support the fire.

Prices; Heavy Tin Smoke Engine, four-inch Stove, per mail, \$1.50; 3½-inch, \$1.10; three-inch, \$1.00; 2½-inch, 90 cents; two-inch, 65 cents.

BINGHAM SMOKERS

are the original, and have all the improvements, and have been the STANDARD OF EXCELLENCE for 22 years. Address,

T. F. BINGHAM,
Farwell, Mich.



I ARISE



To say to the readers of the BEE JOURNAL that

DOOLITTLE ...

has concluded to sell QUEENS in their season during 1900, at the following prices:

- 1 Untested Queen .. \$1.00
- 3 Untested Queens.. 2.25
- 1 Tested Queen 1.25
- 3 Tested Queens.... 3.00
- 1 select tested queen 1.50
- 3 " " Queens 4.00
- Select Tested Queen, last year's rearing, 2.50
- Extra selected breeding, the very best.. 5.00

Circular free, giving particulars regarding each class of Queens, conditions, etc. Address,

G. M. DOOLITTLE,

11A26t

Borodino, Onondaga Co., N. Y.

Please mention Bee Journal
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23rd Year Dadant's Foundation. 23rd Year

Why does it sell so well?

Because it has always given better satisfaction than any other.
Because in 23 years there have not been any complaints, but thousands of compliments.



We guarantee satisfaction.

What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS. PATENT WEED PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Langstroth on the Honey-Bee, Revised.

The Classic in Bee-Culture—Price, \$1.25, by Mail.

Beeswax Wanted

at all times.

CHAS. DADANT & SON,

Please mention Bee Journal when writing.

Hamilton, Hancock Co., Ill.

California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

The Pacific Rural Press,

The leading Horticultural and Agricultural paper of the Pacific Coast. Published weekly, handsomely illustrated, \$2.00 per annum. Sample copy free.

PACIFIC RURAL PRESS.

330 Market Street, SAN FRANCISCO, CAL.

FREE FOR A MONTH

If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper published in the United States.

Wool Markets and Sheep

has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

WOOL MARKETS AND SHEEP, CHICAGO, ILL.

The Novelty Pocket-Knife.

Your Name and Address on one side—Three Bees on the other side.



[THIS CUT IS THE FULL SIZE OF THE KNIFE.]

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the subscriber, and on the other side pictures of a Queen, Drone, and Worker, as shown here.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a last-time, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the "Novelty" is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the "Novelties," your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be notified of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for \$1.10, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with \$3.00.) We will club the Novelty Knife and the Bee Journal for one year, both for \$1.90.

GEORGE W. YORK & CO., 118 Mich. St., Chicago, Ill.

Please allow about two weeks for your knife order to be filled.